

Disclosed is a helical antenna manufacturing apparatus and method. A controller controls a core driver and a roller driver to rotate a core and a roller according to an rpm which is pre-set according to diameters of the core and the roller, and controls the core driver to move the core in a longitudinal direction according to the moving speed which is set according to working frequency bands of the antenna. When the core and the roller are contacted, they are rotated in opposite directions, and as the roller is rotated, a paste in a paste box moves together with a surface of the core and is printed on the surface of the core. As the core is rotated and moved in the longitudinal direction, a helical line is formed on the core. Pitches of the helical line formed on the core is changed according to the moving speed of the core in the longitudinal direction, and the working frequency bands of the antenna are changed according to the pitches of the helical line. Also, a helical line unit including a plurality of helical lines having different pitches printed on the surface of the core can be formed by controlling the core driver to move the core in the longitudinal direction according to the moving speeds which are set for the respective steps according to the working frequency bands of the antenna.